

# Comparisons of Job Characteristics

**Focus Occupation:** [Architectural and Engineering Managers \(11-9041\)](#)

**Associated Occupation:** [Industrial Engineers \(17-2112\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 83

**Focus Occupation:** Architectural and Engineering Managers (11-9041)

**Associated Occupation:** Industrial Engineers (17-2112)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	18.0	23.2	>>	Current knowledge level is likely more than sufficient
Production and Processing	6.0	17.4	10.7	<<	Extensive education and/or training may be required
Mathematics	9.2	15.6	17.4	>	Current knowledge level is likely sufficient
Mechanical	6.8	15.6	10.4	<<	Extensive education and/or training may be required
Design	5.2	14.8	19.0	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 80

**Focus Occupation:** Architectural and Engineering Managers (11-9041)

**Associated Occupation:** Industrial Engineers (17-2112)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Reading Comprehension	10.7	14.8	14.8	0	Current skill level may be sufficient
Complex Problem Solving	9.1	12.8	13.0	0	Current skill level may be sufficient
Writing	9.2	12.8	13.5	0	Current skill level may be sufficient
Monitoring	9.9	12.2	11.9	0	Current skill level may be sufficient
Mathematics	6.2	10.3	11.7	>	Skill level is likely sufficient
Systems Analysis	6.5	9.9	10.7	0	Current skill level may be sufficient
Systems Evaluation	6.4	9.5	10.7	>	Skill level is likely sufficient
Management of Material Resources	3.7	7.2	9.2	>	Skill level is likely sufficient

Management of Financial Resources	3.3	6.0	9.7	>>	Skill level is likely more than sufficient
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The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities	Similarity of Focus Occupation to Associated Occupation: 96
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Focus Occupation: Architectural and Engineering Managers (11-9041) Associated Occupation: Industrial Engineers (17-2112)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	14.6	15.2	0	Current ability level may be sufficient
Written Expression	9.8	14.1	13.8	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.6	13.9	0	Current ability level may be sufficient
Inductive Reasoning	10.2	12.8	12.5	0	Current ability level may be sufficient
Information Ordering	9.9	11.8	12.0	0	Current ability level may be sufficient
Selective Attention	8.7	10.7	8.4	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	10.5	13.3	>	Current ability level is likely sufficient
Visualization	7.5	10.3	10.1	0	Current ability level may be sufficient
Time Sharing	6.6	8.5	7.6	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common	Similarity of Focus Occupation to Associated Occupation: 78
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Focus Occupation: Architectural and Engineering Managers (11-9041) Associated Occupation: Industrial Engineers (17-2112)	
Work Activities	Exclusivity of Activity
Advise clients regarding engineering problems	67
Assign work to staff or employees	30
Communicate technical information	4
Confer with engineering, technical or manufacturing personnel	25
Coordinate engineering project activities	71
Develop policies, procedures, methods, or standards	21
Develop safety regulations	74
Direct personnel in support of engineering activities	74
Evaluate engineering data	60
Lead teams in engineering projects	73
Plan testing of engineering methods	72
Prepare technical reports or related documentation	22
Read blueprints	10

Read technical drawings	7
Resolve engineering or science problems	46
Understand engineering data or reports	48
Use long or short term production planning techniques	74
Use project management techniques	47
Use scientific research methodology	21
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 50

**Focus Occupation: Architectural and Engineering Managers (11-9041)**  
**Associated Occupation: Industrial Engineers (17-2112)**

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Indicating and recording instruments	2
Industry specific software	1
Pressure measuring and control instruments	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.